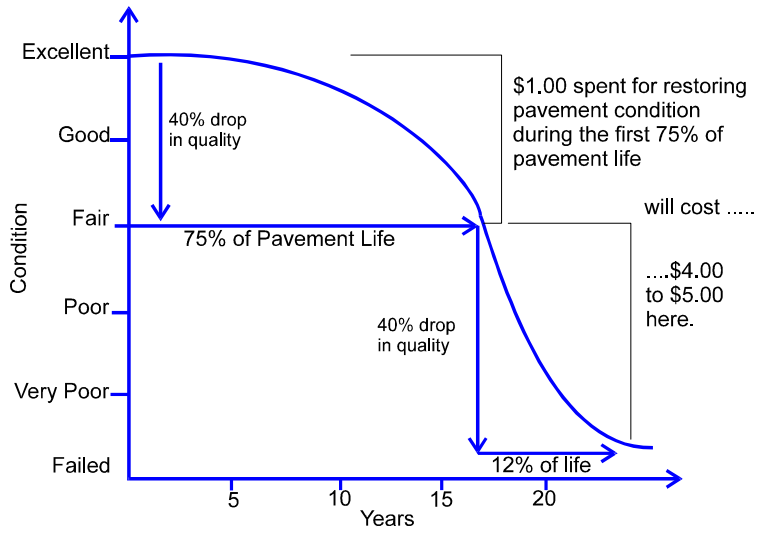
PAVEMENT CONDITION

One significant investment that a city, town, or state makes in the transportation infrastructure involves highway pavements. Because pavements represent such a large investment, they deserve constant attention to keep them in good condition to support the level of service for which they were designed. Poorly maintained surfaces increase travel time, decrease the capacity of the road, can create unsafe conditions for the traveling public, and increase maintenance costs. The cost to rehabilitate pavements increases dramatically when the restorative treatment is delayed beyond a reasonable time frame. The best pavement rehabilitation treatments are determined through the NHDOT's emerging pavement management program.

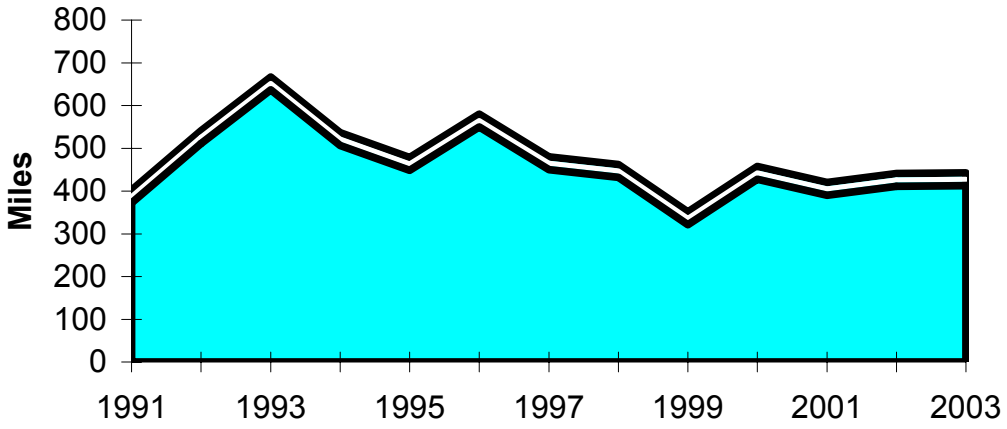
New Hampshire's pavement management plan depends on the experience and suggestions of maintenance personnel who "live" with the roads on a daily basis. Their observations, together with information provided by pavement condition data collection efforts are used to develop annual pavement rehabilitation plans. The NHDOT has purchased pavement management software and is integrating it into the decision making process.

PAVEMENT PERFORMANCE



The above curve demonstrates the advantage of timely treatment to contain costs for rehabilitating a typical stretch of roadway. The curve is representative for a road with a design life of about twenty years. The slow decline in pavement condition, followed by a much sharper decline is typical. Minor pavement maintenance before year 15 will generally restore the pavement condition for about five years. If treatment is delayed for another 3 years, it will cost 4 to 5 times more than the minor treatment.

Beginning in 1991, increased funding allowed for more resurfacing work to be accomplished with more extensive treatments. Subsequently, with increased costs and other priorities the mileage of resurfacing work has leveled off and to a degree has somewhat declined. The following chart shows the number of resurfacing miles each year since 1991:



The current 2003 Resurfacing Plan is expected to address approximately 444 miles of needs. The following table along with the accompanying map illustrates pavement condition in the state based on 2002 pavement data.

PAVEMENT CONDITION	MILES	COLOR
No Work Required	1296	Green
Some Work Required	1862	Yellow
Major Work Required	780	Red
Total	**3938**	

Expected Future Conditions

The expected future conditions of our pavements are based on a number of factors. These include, but are not limited to, the type and depth of base material, most recent date of construction, traffic and heavy truck volumes, and drainage features. If this information is known for a particular roadway, some assumptions can be made to predict the future condition of the pavement. Many roads in this state have evolved from old wagon trails or cow paths with little done over the intervening years to address subgrade issues. For those roads that are newer, designs include good base structure and material to support the pavement on top of it.

For those pavements that were built with substantial base courses, no major work should be expected for 15 years after construction. If the road is maintained and resurfaced every 8-12 years, the pavement should remain in a good condition.

For those pavements that evolved out of some former type of trail or path, there is little or no structural support under the pavement. Because of this, maintenance activities are required more frequently. Roads like these will typically be in fair condition at best or poor at worst. Unless there is total reconstruction, it is unlikely that the road will ever be in good or excellent condition. Typically, any resurfacing or other maintenance project will only show an improvement for that road for a very short period of time (perhaps 5 years) before it is back to fair/poor condition again.

The current philosophy of the NHDOT is to treat and keep in good condition those roads that are the most widely used and traveled in the State. These roads are most likely to have been constructed or reconstructed with a good base, due to the amount of traffic using the road.

Less traveled, poor condition roads, though treated regularly, seldom are better than fair condition. The prohibitive cost of complete reconstruction prevents a better solution to the problem. The Highway Maintenance Districts have begun a plan of "Low Cost Reconstruction" to address these roads. Less expensive than normal reconstruction, this plan includes upgrading highway drainage, recycling pavement, and resurfacing. This program holds promise for lower volume state maintained roads.

It has been a goal of the NHDOT to address roads in poor condition. The major objective for the future will be to upgrade those roads in lesser conditions, while still maintaining those in good conditions. Newer technologies and maintenance techniques, such as thicker overlays, are being looked into, in an effort to increase the life of pavements. Continued funding and local prioritization will remain important elements in addressing low volume highways on the State's system.

Pavement Condition Map

New Hampshire DOT

Department of Transportation

Bureau of Transportation Planning

0 5 10 15 20 25 Miles

MAP BASED ON YEAR 2002 DATA

ROADS RATED ON THIS MAP ARE THE NUMBERED ROADS ON THE STATE MAINTAINED HIGHWAY SYSTEM. THE LEVEL OF WORK REQUIRED IS BASED ON THE ROUGHNESS OF THE SURFACE, RIDE COMFORT INDEX (RCI). THE MAP IS BASED ON DATA COLLECTED AS OF NOVEMBER , 2002.

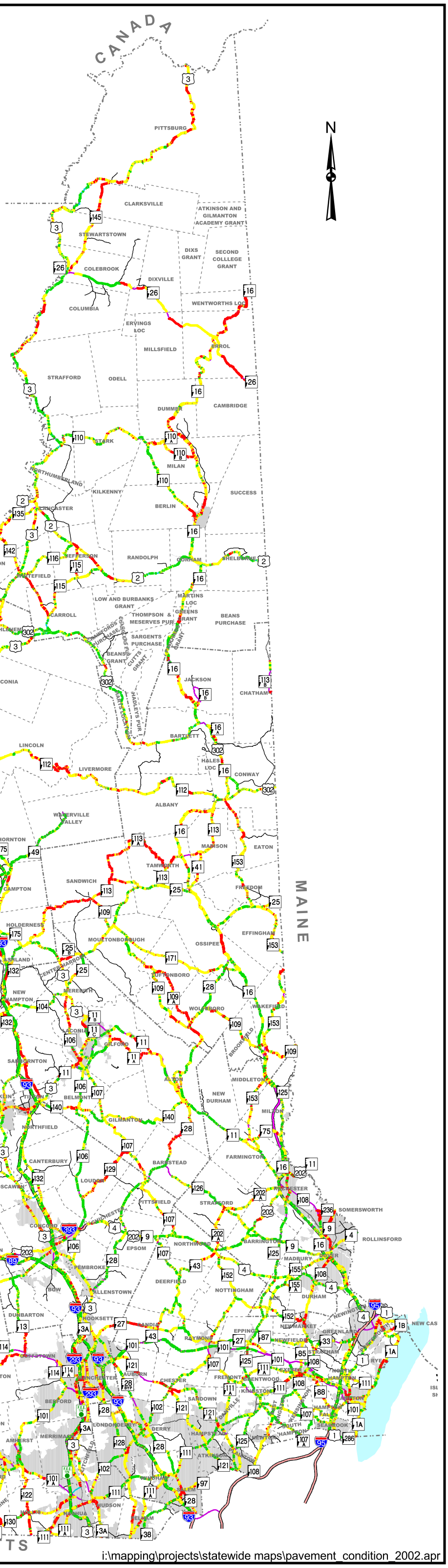
ROAD CONDITIONS

NO WORK REQUIRED
(RCI 3.5 - 5.0) (1296 MILES)

SOME WORK REQUIRED
(RCI 2.51 - 3.49) (1862 MILES)

MAJOR WORK REQUIRED
(RCI 0 - 2.50) (780 MILES)

URBAN AREAS



June 2003

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